

ABSTRACT OF THE DISCLOSURE

An exposure method immerses, in liquid, a surface of an object to be exposed, and a surface of a projection optical system closest to the object, and projects a repetitive pattern formed on a mask via the projection optical system onto the object. The exposure method forms on a pupil of the projection optical system an effective light source that emits, from an axis orthogonal to an optical axis of the projection optical system, light that is parallel to a repetitive direction of the repetitive pattern and has an incident angle θ upon the object, wherein the light includes only s-polarized light in an area of an incident angle θ that satisfies $90^\circ - \theta_{NA} \leq \theta \leq \theta_{NA}$, where θ_{NA} is the largest value of the incident angle θ .